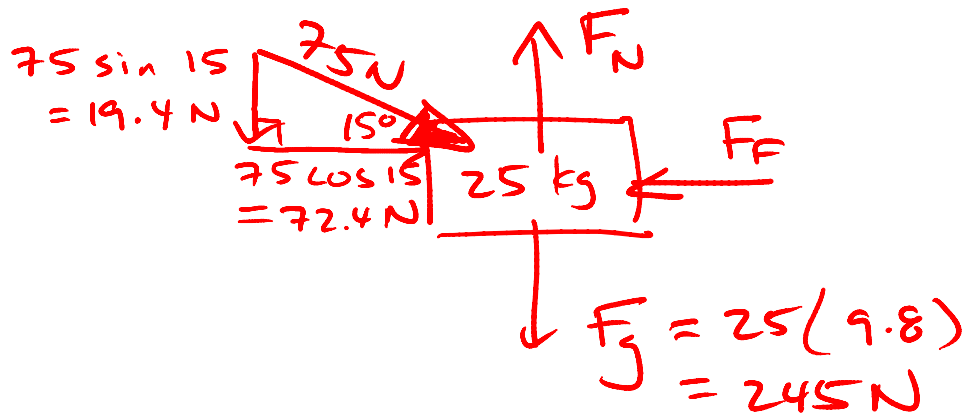


Example #7. A force of 75 N pushes down at an angle of  $15^\circ$  on a mass of 25 kg. If the coefficient of friction is 0.15, find the acceleration.



$$\rightarrow \text{find } F_N: 19.4 + 245 = F_N$$

$$F_N = 264.4 \text{ N}$$

$$\rightarrow \text{find } F_f: F_f = \mu F_N = .15(264.4)$$

$$F_f = 39.66 \text{ N}$$

$$\rightarrow F_{\text{net}} = 72.4 - 39.66 = 32.7$$

← see diagram

$$F_{\text{net}} = ma \quad 32.7 = 25a$$

$$\boxed{a = 1.3 \text{ m/s}^2}$$